



EVERY CHILD MATTERS ACADEMY TRUST WELLGATE PRIMARY SCHOOL POLICY FOR MATHEMATICS

The terms *Trust* and *School* (and levels within e.g. governors and trustees) are interchangeable and apply to all schools within the Trust

1 Rationale

Mathematics plays an important role in all of our lives. We use it in everyday activities such as shopping; measuring; keeping time; making estimations and judgements about speed and distance whilst driving; and when playing sports and games. An understanding of mathematical skills and concepts, together with the ability to apply them, can equip our children with the powerful knowledge with which to understand the world and to improve it.

2 Purpose

The purpose of our mathematics policy at Wellgate Primary School is:

- To establish an entitlement for all pupils.
- To establish expectations for teachers and pupils.
- To promote continuity and coherence across the school.
- To promote better understanding of mathematics within school and the wider community.

3 Aims and Objectives

We aim for each child to:

- Reason and explain mathematically.
- Have a positive attitude towards mathematics.
- Have confidence in their mathematical ability.
- Be able to work systematically, co-operatively and with perseverance.
- Be able to think logically and independently.
- Experience a sense of achievement regardless of age or ability.
- Understand the appropriate underlying skills, concepts and knowledge of number, measurement, geometry, statistics, algebra and ratio and proportion.
- Be able to apply previously acquired concepts, skills, knowledge & understanding to new situations both in and out of school.
- Understand and appreciate pattern and relationship in mathematics.
- Be able to communicate with peers and adults, ideas, experiences, questions, clearly and fluently, using the appropriate mathematical vocabulary.
- Be able to explore problems using the appropriate strategies, predictions and deductions.
- Have equality of opportunity regardless of ability, gender or race.
- Be aware of the uses of mathematics beyond the classroom.
- Encourage the use of mental calculations and efficient strategies to work out solutions.



- Mastery in mathematics is promoted throughout school and staff follow the key concepts.

We would like parents to:

- Be actively involved in their children's mathematical learning both in school and at home.
- Develop positive attitudes towards mathematics and actively support their children in practising mental strategies at home, in particular their times tables.
- Understand and support the school's mathematics policy and teaching.
- Be well informed of their children's progress through annual Records of Achievement and parents' evenings.

4 Expectations

By the time children leave our school, we expect them to be confident and able mathematicians who communicate their thoughts and understanding effectively.

By the end of the EYFS, the majority of children will have achieved the Early Learning Goals in Number and Shape, Space and Measures.

By the end of Key Stage 1, the majority of children will be working within the expected standard for Year 2. Most pupils are expected to achieve at or above age-related expectations.

By the end of Key Stage 2, the majority of children will be working within the expected standard for Year 6. Most pupils are expected to achieve at or above age-related expectations.

5 Management of Mathematics

A. Roles and Responsibilities

The Maths Leader will lead by example and will support other teachers in planning, teaching and assessment. She will work to secure high-quality teaching, effective use of resources and the highest standards of learning and achievement for all pupils across both key stages. The leader will monitor standards in maths across the school: classroom observation, work scrutinies, teachers' planning and pupil dialogue and as part of the Senior Leadership Team (SLT): data analysis and pupil progress meetings. She will work with the Head Teacher to monitor and evaluate teaching and progress. She will identify staff training needs, plan and deliver staff meetings. The leader will attend LA/Trust meetings for subject leaders and other appropriate courses as well as match other courses to the specific needs of staff in the school and School Development priorities.

The Head Teacher supports the mathematics leader and staff in carrying out the Mathematics Policy. She sets high expectations and monitors teaching and progress and discusses the implications of these with the leader. She encourages a whole-school approach, keeping staff, support staff, governors and parents well informed. She regularly reviews the current Maths Action Plan. The Head Teacher will ensure that mathematics is given a high profile in the school's development work for excellence.



The Special Needs Leader will support the mathematics leader and teaching staff in managing children with special educational needs. All teaching staff will use the objectives in the Primary Mathematics Curriculum when preparing Individual Support Plans. They will also use the B-squared materials to support the assessment of children who are achieving significantly below age-related expectations. Pupils who are well below the expected level of attainment will have 1:1 planning for each lesson.

The teachers will implement the maths lesson, sharing clear learning objectives with the children as well as using a chunking approach where necessary (this is where the teacher splits the main lesson into sections using AfL techniques to determine how the lesson will progress). They will use a range of teaching styles such as whole class direct teaching, group/paired and individual work. They will use The National Curriculum in England (2014) for planning appropriate, whilst challenging lessons with an awareness of end of year objectives for assessment. They will use the designated medium and short term planning formats agreed upon by all staff. They will remind children to practise their times tables at home along alongside rapid recall of other number facts (dependent on each child's ability).

Teaching Assistants, HLTA's and cover supervisors will be included in staff training for mathematics where appropriate. They will have a copy of/access to teachers' plans and a clear understanding of their role in each part of the lesson. They will share the learning objectives for each lesson and know, demonstrate and encourage the use of the key vocabulary for the lesson.

B. Time Allocation for Mathematics

Children in our Early Years Foundation Stage will be taught mathematics daily. The main focus of the lesson will be taught in larger groups during the day. Children will then be supported to explore and investigate mathematics through child-initiated learning, adult interaction and through some adult directed activities.

In KS1 the daily mathematics lesson will last between 45 minutes and 60 minutes.

In KS2 the daily mathematics lesson will last 60 minutes.

Each class from Y1 – Y6 will start the day with some arithmetic questions so that they are continually practising the strategies for their age group.

C. Cross Curricular Maths

Mathematics is taught discretely each day with opportunities for cross-curricular learning which is planned for regularly. We identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work so children can see that maths is not an isolated subject. As maths is such a vast subject that is embedded in everyday life, it is expected that it will be applied across the curriculum in all subject areas. In role play activities, children will have a range of opportunities to use the four operations, estimate, measure and problem solve in real-life situations. Children will be encouraged to use and apply their mathematical skills and knowledge in all areas of the curriculum.



D. The Daily Maths Lesson

Children in our Nursery and Foundation Unit are taught maths daily through a focused Maths lesson. Children will then be able to explore the knowledge and skills taught through planned provision or targeted interventions. Further incidental opportunities to practise mathematical concepts will be planned into daily routines.

The Daily Maths lesson from Y1 to Y6 is based around The National Curriculum in England (2014). From Year 1 onwards, the children are given mini-assessments before a unit of work to see what they are able to do and what they need to do next to move on in their learning. Differentiation will look differently to how it has done previously as the majority of the children will be completing the same work. However, the questions that these children get asked/ the support they are given in lessons and the resources that they use could be different. Pre-teaching will play a large part in the daily maths lessons based on the assessments that the children have completed prior to the subject. Any children who are still finding the learning tricky will be given extra support in an afternoon so that they are ‘keeping up and not catching up.’ The teacher will use AfL skills to move learning on at a quicker pace if children are ready to progress in their learning.

Reasoning and explanation both play a big part in the curriculum and teachers are expected to give the children the opportunity to answer these types of questions in their maths learning on a daily basis.

E. Mastery in Mathematics

Pupils will partake in activities based around the ‘Concrete, Pictorial, Abstract Approach’ (CPA Approach) for the majority of their learning. Teachers and teaching assistants will offer all children a range of concrete apparatus/manipulatives to solve different problems e.g. numicon, diennes, place value counters etc. Manipulatives as well as other resources will be available in classes for children to use as they wish. Pupils will learn the different concepts in a variety of contexts so that they are secure in their mathematical learning. Pupils will learn the different concepts in depth rather than moving into areas in the following year group.

Hit the Button

Pupils will partake in Hit the Button activities at home and in school so that they are constantly practising their basic number facts. The Hit the Button skills have been matched to the current curriculum so that children are learning the appropriate skills for their year group. Children will be rewarded on a half termly basis with certificates and teachers will keep a record of their progress in the classroom so that children know what they are aiming for.

Display

At Wellgate, we recognise the importance of interactive and kinaesthetic displays in order to encourage mathematical enquiry and stimulate the interest of pupils. Display can also provide an invaluable opportunity to present maths in a range of real-life contexts. Each classroom should have an attractive interactive maths display with hands-on activities for pupils to experience. The whole school’s maths displays aim to engender a love of maths and show mathematical learning at all ages.



F. Planning and Assessment

Planning

All maths lessons are planned from The National Curriculum in England (2014) and have learning objectives and mathematical vocabulary taken from the appropriate year groups. Learning objectives are changed into simple, child-friendly language by the teacher. The objectives should be clear, and referred to during the lesson, so that children are sure what is required of them to achieve success during that lesson. Their success is marked against their learning objective and this is fed back to them during or after the lesson as either oral or written feedback. Pupils should be given a variety of different contexts for them to apply their skills so they are able to gain a deep understanding. Pupils should not be given learning objectives from the year above.

The teacher will use an 'S' plan format which is based on the mini-assessments that the children have completed alongside a variety of small steps in line with the mastery approach which the school have adopted. 'S' planning will work alongside the teachers' detailed smartboards which should include: key mathematical vocabulary, main teaching points, key facts, a variety of questions and an appropriate challenge. Resources should be well prepared and organised and used alongside manipulatives to support the learning taking place in the classroom.

Afterwards, the teacher should update FLiC (Framing Learning in the Classroom - online assessment recording/reporting tool) to show which children have completed the relevant objective. The updating of FLiC could take place after individual lessons or after a unit of work to show where children are in their learning.

Medium term (half-termly) plans are again taken from the objectives set down in the National Curriculum in England (2014). Teachers will plan from the strands which are set out for each year group ensuring that approximately 70% of the planning is based on number (this may be related to other strands).

Medium term plans need to show how much time will be allocated for an objective to be taught and some similar objectives may be taught together.

A copy of all planning, medium and short term, should be placed in the appropriate folders in the Shared network folder.

Assessment

Each teacher uses FLiC to record the assessments of the pupils. The FLiC statements are included on the planning to ensure that they're covered and that the planning is focused on the given objectives. Teachers also annotate their planning to show how pupils have performed in a lesson and what they're next steps in learning are/need to be.

Other forms of assessment are: the mini assessments which take place before a unit of learning, AfL which takes place throughout the maths lesson and Rising Star Assessments which take place three times a year.

Targets

When appropriate, teachers will leave a target on the pupils' work to support and correct any misconceptions, or move them on in their learning by providing a further challenge or question. If necessary, teachers will plan time for the pupils to work with the teaching



assistant or teacher in the afternoon so that they can address any misconceptions from the lesson.

Self Assessment

Children are encouraged to think about what they are learning and to make judgements about how well they think they are doing. These assessments are ongoing during lesson time through discussing work, ideas, explanations with a ‘Talking Partner’, or answering questions and explaining to the rest of the class.

Recording

Much of the mathematics done in EYFS will be practical activities and will not be formally recorded. Generally, the younger the age, the less written recording they will have done. In the EYFS, evidence will be recorded in the form of notes, photographs and within the Tapestry online Learning Journal. In Year 1, photographs showing the children working on an activity are used to supplement class/group recording. These will contain a quote of what the child is saying about their work with a brief outline of the task and the learning objective it is covering. From Year 1 upwards, the majority of the children will begin to record most days. Recording should always be purposeful, to practise a written strategy, to explain a method or reasoning, to use signs and symbols etc.

Reporting Progress to Parents/Carers

Parents are given information about their child’s progress at any time. Our school has an ‘open-door policy’ at all times and a parent is able to arrange to speak to a teacher at any time. Parents /Carers also receive sheets during the Autumn and Spring terms which contain information about their child’s maths targets and current progress and achievement. Parents are invited to regular open days/evenings, family learning sessions and other events during the year so that they can see both how their child is progressing and how they learn. Towards the end of the Summer term, each child receives a Record of Achievement which informs the parents how well their child has done over the year, what targets they need to work on and their current level of attainment.

Monitoring & Review

The Senior Leadership Team and/or leader will monitor lessons during each academic year. They will discuss their findings and give constructive feedback to teaching staff. Planning will be monitored throughout the year to ensure that objectives, differentiation, learning, pitch and activities are all appropriate to the age/ability group. Regular work scrutinies will take place to ensure that children are learning at the correct level, being challenged appropriately and that planning reflects what is both being taught and learnt. The Maths Action plan is evaluated, updated and reviewed throughout the year.

Pupil Progress Meetings

Every 6 weeks, Pupil Progress Meetings take place with the Phase Leaders and class teachers. At these meetings, any children who are under-achieving are discussed and where necessary plans are put in place to ensure that the children will make expected progress.



Homework

Children are encouraged to practise their times tables at home and other number facts (relevant to their ability group). They are encouraged to use maths in real life situations e.g. when they are shopping, helping to bake at home. Children in all years are provided with maths homework. In Key Stage One, this can be a practical task or a task with a written outcome. The tasks will link to the learning in that week. Whereas in KS2 this tends to be a written homework. However, children are still expected to practise their mental skills.

Staff Development

Teachers are expected to keep up-to-date with subject knowledge and use current materials that are available on the DfE and NCETM website or in school.

Staff training needs are identified by the Head Teacher, Senior Leadership Team and Maths Leader as a result of whole school monitoring, evaluation and performance appraisal. These will be reflected in the Mathematics Action Plan. The Maths Leader will arrange for relevant advice and information, such as the feedback from courses, to be disseminated. Where necessary, the Maths Leader will organise and lead school based training for teachers and TAs.

Special Educational Needs and Intervention Programmes

Children who are working below age-related expectations will be identified from both the teacher's assessments and termly matrices. The needs of many of these children will be catered for in the use of appropriate methods and activities, adult support in lessons and the daily maths lesson. Children in both KS1 and in KS2, may need a maths target including on their provision map.

All children will be challenged so that they can meet their full potential. This will take place through stretching children in a given area rather than using objectives from the year above. This ensures that they have a deep understanding of a given concept and can apply it in a range of contexts.

Children who are Gifted and Talented in maths will be given activities so that they can also meet their full potential and are challenged in their learning.

Inclusion

Mathematics is offered to all children in our school irrespective of ability, gender or race and in line with the school's Equal Opportunities policy, Inclusion Policy and Accessibility Plan. All children receive teaching on a daily basis and activities are differentiated accordingly.

The needs of children with English as an additional language will be met through planning and support from outside agencies where appropriate. This is supported by our Equal Opportunities policy. B-squared sheets are used for pupils who are not yet accessing Year 1 Mathematics Objectives.



Resources and ICT

General maths resources for EYFS, KS1 and KS2 are kept in the infant corridor. Each class will also have a wide-range of equipment and resources appropriate to their year group. Some resources, such as digit cards and arrow cards, will be in use through both Key Stages. Other resources should demonstrate some continuity and progression between the year groups in how they are being used.

The school has some good ICT resources available to use. We also have access to the maths resources and other educational sites on the internet. Teaching games can be accessed on classroom computers, interactive Smartboards and in the computer suite. There is also a range of programmable toys and ‘bots’ available for use in maths lessons to support topics such as position, movement, shape, angles and problem solving.

Transfer between Primary and Secondary Education

For continuity, progression and liaison, a copy of each child’s progress will be forwarded to the appropriate school.

Reviewed By	V.Rich	Date	26.9.19
Endorsed By	J. Woodcock	Date	1.10.19
Approved By	S. Belt	Date	6.10.19

Next Review Date- October 21

